

McHenry County's Solid Waste Stream Annual Analysis for 2004

Introduction

Solid waste and recycling data for 2004 were collected over the first three months of 2005, in conjunction with the licensing of the haulers in McHenry County. Also, data was collected from townships, one not for profit recycling group, two special collection events and two major demolition sites.

Plans and Ordinances

The *Solid Waste Management Plan 10-Year Update*, (SWM Plan) which updates the 1985 plan and updates, was amended in 2004 to include wording that would require an applicant for a pollution control facility to come to the County and negotiate a host benefit agreement before receiving a letter of consistency with the SWM Plan (which is a hearing requirement of the Illinois Environmental Protection Agency). The wording of the amendment expands and clarifies that this is a required step for a pollution control facility expanding or locating anywhere in the County, whether it is unincorporated or incorporated.

Also in 2004, the County adopted a generic host benefit agreement and revised the Pollution Control Facility Siting Ordinance.

The 2004 Data

The majority of the data were received from the annual reports submitted by each hauler licensed by the County. In 2004, three new haulers were licensed by McHenry County. Again this year, septic pumping waste that was land-applied was not included in this report.

In 2004, there were two major special event collections. A Household Hazardous Waste (HHW) collection was conducted at McHenry County College in March. A range of toxic, flammable or corrosive household products were brought in to be disposed of in an environmentally safe way. The Illinois Environmental Protection Agency (IEPA) sponsored the event with McHenry County acting as a co-sponsor and the Planning and Development Department coordinating the staging and promotion of the event. The second major collection event, for used tires, was held in May. McHenry County Planning and Development worked with the IEPA and the McHenry County Farm Bureau to sponsor the event.

Both events were well attended and successful in collecting large quantities of difficult to dispose of items. The tire collection will increase the recycling rate, whereas the HHW collection was largely not recyclable.

Also in 2004, two demolition projects were investigated. As McHenry County becomes more urban, tear-downs become more prevalent as a way to optimize the use of the land. In Woodstock, the Rohm & Haas industrial research building was torn down and the material was processed on site and then hauled away to be recycled. Another industrial building (formerly Guardian Electric) was also demolished. Because the brick, mortar, and concrete were processed (recycled) for use as road base, and the steel was also recycled, the recycling totals for the county were significantly increased.

Overview of the Solid Waste Stream

The quantities of materials reported are called “discarded materials”, which by definition includes municipal waste, recyclables, and compostable materials (which are considered recycling). In 2004, the amount of discarded materials reported as being generated in McHenry County was 335,444 tons. Data for the year 2004 are listed in Table 1, along with comparable data for the last six years.

Table 1
Solid Waste Stream Overview 1998 – 2004

	1998	1999	2000	2001	2002	2003	2004
Discarded Materials Total (in tons)	276,587	297,488	293,802	305,708	320,981	312,375	335,444
Recyclables (in tons)	85,189	105,933	105,013	86,685	108,373	89,881*	129,112*
Recycling Rate (%)	30.8	35.6	35.7	28.4	33.8	28.8	38.5
Population (est.)	240,945	259,153	260,077	268,208	281,165	286,091	296,389
Disc. Materials (in p/p/d)	6.29	6.29	6.27	6.25	6.26	6.07	6.20

* includes landscape waste that was recycled at composting sites

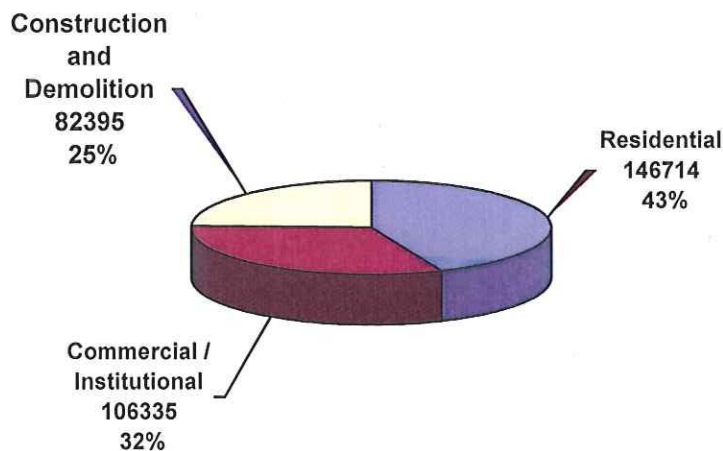
p/p/d is pounds per person per day

Source: *McHenry County's Solid Waste Stream Annual Analysis for 2003*, Waste Haulers' Annual Reports 2004, HHW report, Used Tire Collection Summary, and population estimates from Northeastern Illinois Planning Commission.

Solid Waste Generation and Disposal/ Recycling

The solid waste data were reported by the sector where the waste was generated. Diagram 1 shows quantities generated by the residential, commercial/institutional, and construction and demolition sectors.

Diagram 1
Where Discarded Materials Were Generated



Discarded materials are collected and transported to one of three possible destinations; 1) landfills (or transfer stations en route to landfills), 2) recycling centers or 3) composting sites. The disposition of discarded materials in McHenry County is shown in Diagram 2.

**Diagram 2
Destination of Discarded Materials**

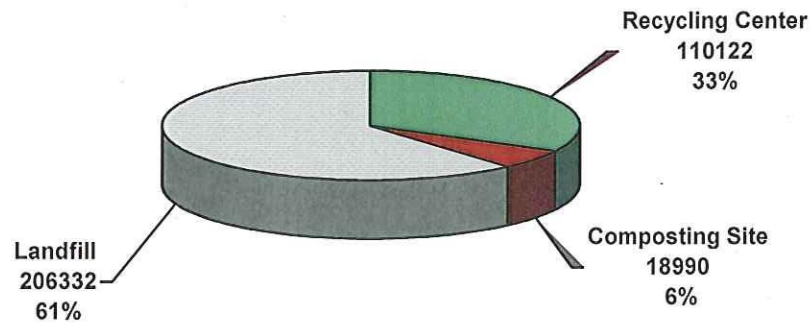


Table 2 lists both the source of McHenry County discarded materials and their destination.

**Table 2
Discarded Materials (in tons) 2004
by Destination and by Where They Are Generated**

	From Residential	From Commercial/ Institutional	From Construction & Demolition	Total
Land fill	79,539	83,648	43,145	206,332
Recycling Center/ site	48,334	22,687	39,101	110,122
Composting Site	18,841	0	149	18,990
Total	146,714	106,335	82,395	335,444

Recycling and Recycling Rates

A compilation of the recycling data is listed in Table 3.

Table 3
2004 Recycling and Recycling Rate by where They Were Generated

	Discarded Materials in tons	Recyclables in tons	Recycling Rate
Residential	146,714	67,175 *	45.8%
Commercial/ Institutional	106,335	22,687	21.3%
Construction & Demolition	82,395	39,250	47.6%
Countywide total/ average			38.5%

* includes landscape waste that was recycled at composting sites

Economic and Environmental Concerns

There was a steady and favorable market for most recycled paper products in 2004. The market value of recycled plastic containers (Soft drink and water bottles) increased significantly over the span of the year.

The costs associated with curbside collection were on the increase, because of the increases in the cost of diesel fuel and the distance factor for traveling to the landfill or recycling center.

Two companies are in the process of negotiating host agreements with municipalities and/or the County, in anticipation of filing with the IEPA for a permit for a transfer station.

Observations and Analysis

In 2004, the overall recycling rate of 38.5% is much higher than the 2003 rate of 28.8%, because of including demolition recycling of two large structures. In 2003, the construction and demolition rate was only 6.26%, in contrast to 47.6% in 2004.

Conclusions

Without including the quantity of materials related to demolition recycling, the recycling rate would have been 31.3%, which is more comparable to the 2003 rate. Demolition recycling dramatically increased the overall recycling rate. In either case, McHenry County met the Solid Waste Planning and Recycling Act (415ILCS 15) goal of 25% minimum for recycling, but did not meet the goal set in the *Solid Waste Management Plan 10-Year Update* of 41% recycling overall for the year 2004. Including the demolition quantities (which typically are very heavy) shows how much two sites can affect the overall county rate. On the other hand, the county's residential and commercial sectors are not reaching the county's recycling goal.